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# (12) United States Patent

Sasson et al.

# (54) COMPOUNDS AND COMPOSITIONS FOR USE IN AUGMENTATION OF GLUCOSE

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### (57) ABSTRACT

The present invention is directed to compounds such as: formula wherein linker is independently selected from the group consisting of —S—, —S—S—, —S—(CH2)n-, —NH—, —NH—(CH2)n-, —O—, —SO2-, arylene, heteroarylene; R1 is selected from the group consisting of straight or branched C4-C20 alkyl, straight or branched C4-C20 alkenyl, straight or branched C4-C20 alkynyl, each optionally interrupted with at least one NH, C5-C7 saturated cycloalkyl or heteroalkyl ring, C5-C12 aromatic or heteroaromatic ring, each optionally substituted with at least one group selected from —COOH, —NH2, C1-C8 alkoxy, C1-C5 amidyle, C1-C5 carboxyl, halogen; and R2 is independently selected from the group consisting of H, OH, SH, NH2, NO2, halogen, CN, C1-C8 alkoxy, C1-C5 carboxylic acid, straight or branched C1-C8 alkyl, straight or branched C2-C10 alkenyl, straight or branched C2-C12 alkynyl each optionally substituted by at least one substituent selected from the group consisting of C1-C5 alkoxy, C1-C5 carboxylic acid, OH, SH, NH2, halogen; and compositions for use in the treatment of diabetes and related dis-orders.

$$R_2 - \frac{1}{100} \sum_{S}^{N} \text{Linker-} R_1.$$
 (V)

9 Claims, 15 Drawing Sheets